

REMARKS

Reexamination and reconsideration of the application as amended are requested to place the claims in better form for allowance or appeal. Claims 1 and 8 have been amended to more definitely describe what Applicants' meant in their previous amendment by "longitudinally engaging". Support for the amended claims comes from the specification, page 3, lines 9-11 and from figures 1 and 2, wherein figures 1 and 2 show the longitudinally-inward-facing surface portion (a portion of transverse surface 38) of the retaining ring 36 and the longitudinally-outward-facing surface (shown at the end of the lead line for item 26) of the barrel portion 22 of the terminal 20 with figure 1 showing the longitudinally-inward-facing surface portion of the retaining ring longitudinally seated against the longitudinally-outward-facing surface of the barrel portion of the terminal.

The examiner's rejection of claims 1-10, 13 and 14 as being "anticipated", under 35 U.S.C. 102, is respectfully traversed. The examiner rejects these claims as being unpatentable over Hollis '203. Claims 2-7 depend from claim 1, and claims 9-10 and 13-14 depend from claim 8.

Claims 1 and 8 now require that a longitudinally-inward-facing surface portion (a portion of transverse surface 38) of the retaining ring 36 be longitudinally seated against a longitudinally-outward-facing surface (shown at the end of the lead line for item 26) of the barrel portion 22 of the terminal 20. This claimed design prevents the sidewall 12 from being squeezed, and possible damaged, between the retaining ring 36 and the terminal 20 during the process for attaching the terminal 20 to the battery case 10. Compare Applicants' claimed design with the design of Hollis. Hollis does not teach, suggest or describe having a longitudinally-inward-facing surface portion of the retaining ring longitudinally seated against a longitudinally-outward-facing surface of a barrel portion of the terminal. The swaging tool of figure 1 of Hollis grinds the retaining ring (lead locking member 29) against the sidewall 10 as is evidenced from figures 1-2 of Hollis. The design of Hollis is subject to stress cracking during the assembly process while the claimed design of Applicants is not.

Claims 4-7 also require the retaining ring 36 to be welded or fused to the barrel portion 22. The examiner alleges that Hollis teaches heating for deforming the retaining ring and bushing and that such heating is considered a weld as the elements are fused together. Applicants respectfully disagree.

The Examiner has provided a non-technical collegiate dictionary definition of “weld” and “fuse” in alleging that Hollis teaches welding and fusing. Not every attachment process unites the attached members within the meaning of “weld” as understood by those of ordinary skill in the art of welding. Attaching together two members with a nail does not unite the two members within the meaning of “weld” as understood by those of ordinary skill in the art of welding. Attaching two members together by compressing and heating to create a transverse lip to mechanically trap together the members (as in Hollis) does not unite the two members within the meaning of “weld” as understood by those of ordinary skill in the art of welding. Likewise, not every application of heat and pressure will stitch together two members where such heat and pressure is used to create a transverse lip to mechanically trap together the members (as in Hollis).

Hollis teaches the use of a swaging tool. Even a non-technical collegiate dictionary definition of a swaging tool is a tool used by metalworkers for shaping their work (with nothing being said about uniting or stitching together two members).

Hollis teaches a mechanical swaging which produces heat to help the mechanical swaging deformation. Hollis does not teach, suggest or describe that the retaining ring (lead locking member 29) and the lead bushing 21 are fused together. Hollis merely uses heat to soften the retaining ring and bushing such that the swaging tool of figure 1 can deform and mold and elongate and extend the end 24 of bushing 21 over a portion of locking ring 29 as shown at 28 (see column 2, lines 35-42). This deforming-molding-elongating-extending deformation mechanically traps the retaining ring longitudinally between a newly created lip of the deformed retaining ring and the sidewall 10 as shown in figure 2 of Hollis. This deforming-molding-elongating-extending deformation of Hollis is not a fusing together. Hollis states that “[t]he elements of the terminal are mechanically locked in assembled position by a swaging action”

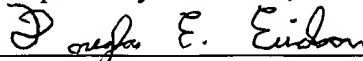
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(see column 2, lines 11-12). A mechanical lock is not a fused or welded joint. Hollis knows what fusing together is (see column 2, line 67 to column 3, line 2) in discussing other elements of his invention which are fused together. Mechanical swaging (but not fusing such as welding) has a lower torque strength and is not as durable during assembly and is subject to slow crevice corrosion by battery acids because there are small crevices in mechanical swaged bonds through which acid can seep through.

The examiner's rejection of claims 11-12 and 15-16 as being "obvious", under 35 U.S.C. 103, is respectfully traversed. The examiner rejects these claims as being unpatentable over Hollis '203. Claims 11-12 and 15-16 depend from claim 8. Applicants' previous remarks concerning the patentability of claim 8 and the welding/fusing claims 4-7 over Hollis are herein incorporated by reference. Also, the Examiner alleges it would be obvious to substitute electrical heating for the heating in Hollis. Applicants respectfully disagree. The heating in Hollis is frictional heating caused by the high speed rotation of the swaging wheels in Hollis whose purpose is to create a radially-outward projection (lip) on the bushing which mechanically locks the retaining ring thereunder (see column 2, lines 35-42 and see the shape of the bushing in Figure 1 before swaging and in Figure 2 after swaging). Electrical heating will not create a locking portion on the bushing in Hollis. Hollis teaches a mechanical locking of the elements of the terminal (see column 2, lines 11-14).

Inasmuch as each of the rejections has been answered by the above remarks and amended claims, it is respectfully requested that the rejections be withdrawn, and that this application be passed to issue.

Respectfully submitted,



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